REMARKS

Applicant respectfully presents Claims 1-3, and 5-30 for examination in the RCE filed herewith. Claim 4 has been canceled herein without prejudice to the filing of divisionals and/or continuations and Claims 1, 2, 5-7, 15, 16, 19-21, 23, 24, 26-28 and 30 have been amended herein to more clearly define the scope of the presently claimed invention. Applicant respectfully requests reconsideration of pending Claims 1-3, 5-30 and submits that the claims and remarks presented herein overcome the Examiner's rejections in the Final Office Action dated January 13, 2005 in the parent application.

35 U.S.C. § 102

Claims 1-3, 6, 9-12, 14, 16-18, 20-22, 23-25 and 27-29 stand rejected under 35 U.S.C. § 102 as anticipated by U.S. Patent No. 6,059,839 ("Dehnert"). The Examiner submits that Dehnert discloses all the elements of independent Claims 1, 16 and and 23. Applicants respectfully traverse the Examiner's rejections.

Applicants respectfully submit that Claim 4 has been canceled and the feature(s) of Claim 4 incorporated into independent Claims 1, 16 and 23. Per the Examiner's own admission, Dehnert does not explicitly disclose that "the disambiguation token comprises a data structure including a plurality of links to data objects in which disambiguation information are stored." Applicants therefore respectfully submit that Dehnert does not teach at least this element of independent Claims 1, 16 and 23 (and all claims dependant on those independent claims). As a result, Applicants hereby request the Examiner to withdraw the 35 U.S.C. § 102 rejections to Claims 1-3, 6, 9-12, 14, 16-18, 20-22, 23-25 and 27-29.

35 U.S.C. §103

Claims 4, 5, 7, 13, 15 and 30 stand rejected under 35 U.S.C. §103 as being unpatentable over the combination of Dehnert in view of "A Simple Mechanism for Improving the Accuracy and Efficiency of Instruction-Level Disambiguation" ("Novak"). Again, Applicants respectfully traverses the Examiner's rejection.

First, Applicant submits that the there is nothing in either reference that suggests that the reference be combined with the other. The mere fact that if combined, the combination *may* provide a benefit does not render the combination of the references obvious or proper. As set out in M.P.E.P. § 706.02(j), "(t)here must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings." Applicants respectfully submit that there is no such motivation and therefore maintain that the combination of these references is improper and requests the Examiner to withdraw the 35 U.S.C. § 103 rejections to Claims 4, 5, 7, 13, 15 and 30.

Even assuming arguendo these references were properly combined, Applicants respectfully submit that the Dehnert and Novak do not render Claims 4, 5, 7, 13, 15 and 30 unpatentable. Claim 4 has been canceled herein and the feature(s) of Claim 4 incorporated into independent Claims 1, 16 and 23. Applicants respectfully submit that neither Dehnert nor Novak, alone or in combination, teach or suggest a memory disambiguation token, as claimed in independent Claims 1, 16 and 23. More specifically, as previously described, Dehnert does not disclose that "the disambiguation token comprises a data structure including a plurality of links to data objects in which disambiguation information are stored." Applicants respectfully submit that Dehnert also does not teach other elements of independent Claims 1, 16 and 23. For example, Dehnert does not teach or suggest an IRF as claimed in Claims 1, 16 and 23. As described in Dehnert, the IRF includes various "variables" and data about the variables (see e.g., Dehnert, Col. 6, lines 20-23). Applicants reiterate that it is well known to those of ordinary skill in the art that variables typically refer to "memory locations". Thus, when Denhert describes an IRF that includes "data gathered about the variables", it appears to be referring to gathering data pertaining to *memory locations*. This interpretation is supported by the language in Dehnert, which describes the data gathered in the IRF as including information on the variables such as variable address taken information and whether they are flagged as direct modification, direct use, indirect modification or indirect use (Dehnert, Col. 6, lines 22-25).

In contrast to variables in a file, the memory disambiguation token claimed herein includes information particular to a *memory reference*. More specifically, as

claimed, the memory disambiguation token identifies information particular to the *memory reference* it is associated with so as to preserve high-level and intermediate-level semantic information. Examples of disambiguation tokens include, but are not limited to, a data structure embedded in the memory reference operators of the intermediate language (IL) or a separate data structure linked to the memory reference operator via a pointer or hash table lookup (Specification, Pages 5-6). Disambiguation tokens, as claimed herein are therefore distinctly different than the IRF files disclosed in Dehnert.

The Examiner disagreed with Applicants' characterization of Dehnert, suggesting that the IRF in Dehnert is in fact similar to the disambiguation token, as claimed herein. Applicants respectfully disagree. The sections highlighted by the Examiner in Dehnert merely describe an IRF that contains code that comes out of the front end of the compiler in an intermediate representation format (Col. 5, lines 40-44). The IRF thus comprises information gathered about variables and processed course code in an intermediate representation format (Col. 5, lines 45-50). Applicants respectfully submit that this IRF is distinctly different than the disambiguation tokens claimed herein, where the disambiguation token in a unique token representing a *memory reference* AND comprising a data structure that included a plurality of links to data objects in which disambiguation information are stored. Dehnert does not teach or suggest such a memory disambiguation token.

Similarly, Novak also does not teach or suggest a memory disambiguation token as claimed. The Examiner submits that Novak teaches a token on page 293-294 where it describes "allowing the front-end to communicate higher level, memory reference information to the back-end by associating each reference with a portion of hierarchical decomposition of the program's address space." The Examiner also cites a section of Novak that states "the data structure created by the compiler during parsing an source-level analysis-which maintain, for example, defuse and alias information (i.e., disambiguation info)" as teaching that the disambiguation token comprises a data structure including a plurality of links to data objects in which disambiguation information are stored. The Examiner then concludes that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Novak into the system of Dehnert to have the disambiguation token

comprise a data structure including links to data objects in which disambiguation information is stored because one of ordinary skill in the art would want to allow the front end of a compiler to communicate higher level memory reference information to the back-end in order to allow for increased efficiency and accuracy of optimization of the code. Applicants respectfully disagree.

Applicants respectfully submit that the sections of Novak highlighted by the Examiner do not teach a disambiguation token, as claimed herein. More specifically, Novak does not teach a token "identifying information particular to the memory reference it is associated with so as to preserve high-level and intermediate-level semantic information", as claimed. The Examiner appears to be suggesting that "a portion of hierarchical decomposition of the program's address space" is comparable to the claimed "high-level and intermediate-level semantic information". Applicants respectfully submit that this section of Novak cannot be expanded to include such a meaning. In fact, as described in Novak, the "data structure created by the compiler... which maintains ... defuse and alias information" suggests that the information maintained in Novak does NOT comprise the "high-level and intermediate-level semantic information", as claimed in independent Claims 1, 16 and 23. The combination of Novak with Dehnert therefore does not teach or suggest at least some of the elements of independent Claims 1, 16 and 23. Claims 4, 5, 7, 13, 15 and 30 are dependent on independent Claims 1, 16 and 23, and as such, the combination of these references also does not teach or suggest the elements of these claims. Applicants therefore respectfully request the Examiner to withdraw the rejection to Claims 4, 5, 7, 13, 15 and 30 under 35 U.S.C. §103.

CONCLUSION

Based on the foregoing, Applicants respectfully submit that the applicable objections and rejections have been overcome and that pending Claims 1-3, and 5-30 are in condition for allowance. Applicants therefore respectfully request an early issuance of a Notice of Allowance in this case. If the Examiner has any questions, the Examiner is invited to contact the undersigned at (310) 406-2362.

If there are any additional charges, please charge Deposit Account No. 50-0221.

Respectfully submitted,

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